

WHAT IS CLAIMED IS:

1 1. A method for determining the time of transmission of a message packet
2 from a network device including a plurality of transmit queues, said method comprising the
3 steps of:
4 disabling a selected transmit queue to flush all packets from the selected
5 transmit queue;
6 placing the message packet in the selected transmit queue;
7 disabling all other transmit queues;
8 waiting a selected time interval sufficiently long for all other transmit queues
9 to be flushed;
10 transmitting the message packet from the selected transmit queue; and
11 measuring time of transmission of the message packet from the selected
12 transmit queue.

1 2. The method of claim 1 where the steps of transmitting and measuring
2 further comprise:
3 reading and saving a base time of a local clock and a first timer value of a
4 timer residing on the network device;
5 reading a second timer value of the timer and transmitting the message packet;
6 and
7 calculating the time of transmission from the base time and first and second
8 timer values.

1 3. The method of claim 1 where the message packet is a SYNC message
2 utilized in the PTP.

1 4. The method of claim 1 further comprising the step of:
2 sending a follow up packet including the time of transmission of the message
3 packet.

1 5. A system for determining the time of transmission of a message packet
2 from a network device including a plurality of transmit queues, said system comprising:
3 means for disabling a selected transmit queue to flush all packets from the
4 selected transmit queue;

5 means for placing the message packet in the selected transmit queue;
6 means for disabling all other transmit queues;
7 means for waiting a selected time interval sufficiently long for all other
8 transmit queues to be flushed;
9 means for transmitting the message packet from the selected transmit queue;
10 and
11 means for measuring time of transmission of the message packet from the
12 selected transmit queue.

1 6. The system of claim 5 where the means for transmitting and measuring
2 further comprise:

3 means for reading and saving a base time of a local clock and a first timer
4 value of a timer residing on the network device; and

5 means for reading a second timer value of the timer and transmitting the
6 message packet: and

7 means for calculating the time of transmission from the base time and first and
8 second timer values.

1 7. The system of claim 5 where the message packet is a SYNC message
2 utilized in the PTP.

1 8. The system of claim 5 further comprising:

2 means for sending a follow up packet including the time of transmission of the
3 message packet.

1 9. A computer program product executed by a processor for determining the
2 time of transmission of a message packet from a network device including a plurality of
3 transmit queues, said computer program product comprising:

4 a computer usable medium having computer readable program code physically
5 embodied therein, said computer program product further comprising:

6 computer readable program code executed by the processor for disabling a
7 selected transmit queue to flush all packets from the selected transmit queue;

8 computer readable program code executed by the processor for placing the
9 message packet in the selected transmit queue;

10 computer readable program code executed by the processor for disabling all
11 other transmit queues;
12 computer readable program code executed by the processor for waiting a
13 selected time interval sufficiently long for all other transmit queues to be flushed;
14 computer readable program code executed by the processor for transmitting
15 the message packet from the selected transmit queue; and
16 computer readable program code executed by the processor for measuring
17 time of transmission of the message packet from the selected transmit queue.

1 10. The computer program product of claim 9 where the computer readable
2 program code executed by the processor for transmitting and measuring further comprises:
3 computer readable program code executed by the processor for reading and
4 saving a base time of a local clock and a first timer value of a timer residing on the network
5 device;
6 computer readable program code executed by the processor for reading a
7 second timer value of the timer and transmitting the message packet; and
8 computer readable program code executed by the processor for calculating the
9 time of transmission from the base time and first and second timer values.

1 11. The computer program product of claim 9 where the message packet is a
2 SYNC message utilized in the PTP.

1 12. The computer program product of claim 9 further comprising:
2 computer readable program code executed by the processor for sending a
3 follow up packet including the time of transmission of the message packet.